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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/540,540  | 09/11/2006  | Norio Hirayama       | 046124-5385         | 7158             |
| 9629  | 7590        | 12/01/2009           | EXAMINER            |                  |
| MORGAN LEWIS & BOCKIUS LLP<br>1111 PENNSYLVANIA AVENUE NW<br>WASHINGTON, DC 20004 |             |                      |                     | FEELY, MICHAEL J |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 1796  |             |                      |                     |                  |
| MAIL DATE   |             | DELIVERY MODE        |                     |                  |
| 12/01/2009  |             | PAPER                |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/540,540             | HIRAYAMA ET AL.     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Michael J. Feely       | 1796                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 03 August 2009.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-5 and 17 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) \_\_\_\_\_ is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) 1-5 and 17 are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 24 June 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Pending Claims***

Claims 1-5 and 17 are pending.

### ***Election/Restrictions***

1. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

- (Type 1a) the method as claimed featuring a poly-addition polymerization reaction between a bi-functional compound having two epoxy groups and a bi-functional compound having two *phenolic hydroxy groups*;
- (Type 1b) the method as claimed featuring a poly-addition polymerization reaction between a bi-functional compound having two epoxy groups and a bi-functional compound having two *amino groups*;
- (Type 1c) the method as claimed featuring a poly-addition polymerization reaction between a bi-functional compound having two epoxy groups and a bi-functional compound having two *carboxyl groups*;
- (Type 1d) the method as claimed featuring a poly-addition polymerization reaction between a bi-functional compound having two epoxy groups and a bi-functional compound having two *mercapto groups*;

- (Type 1e) the method as claimed featuring a poly-addition polymerization reaction between a bi-functional compound having two epoxy groups and a bi-functional compound having two *isocyanate groups*;
- (Type 1f) the method as claimed featuring a poly-addition polymerization reaction between a bi-functional compound having two epoxy groups and a bi-functional compound having two *cyanate ester groups*;

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

2. The claims are deemed to correspond to the species listed above in the following manner:

Claims 1-5 and 17 feature the species (1a) through (1f).

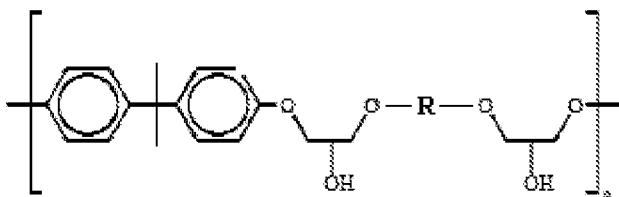
The following claim(s) are generic: none of the claims are generic.

3. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

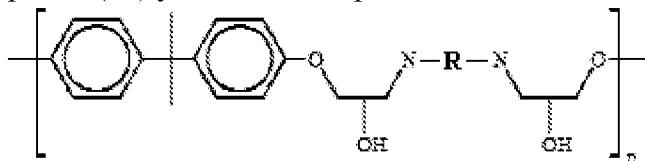
Each of the methods, (1a) through (1f), yields a fiber-reinforced thermoplastic with a structurally distinct thermoplastic material. Specifically, the chemical structures of

thermoplastics formed by the poly-addition reaction relate to six individual special technical features:

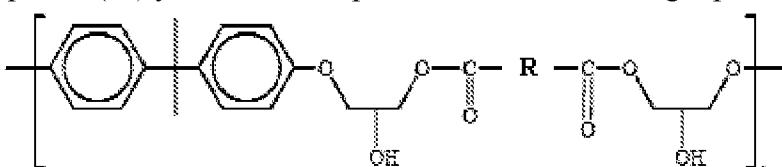
- Species (1a) yields a thermoplastic with the following repeat unit:



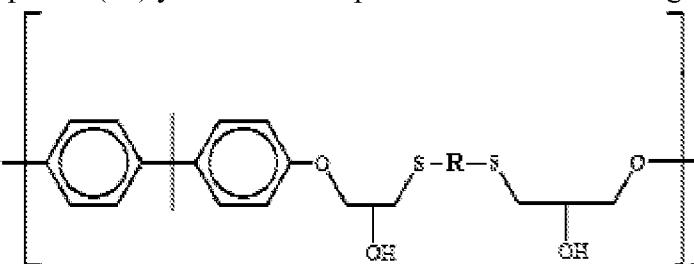
- Species (1b) yields a thermoplastic with the following repeat unit:



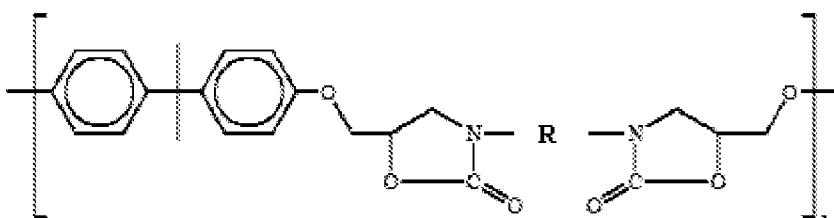
- Species (1c) yields a thermoplastic with the following repeat unit:



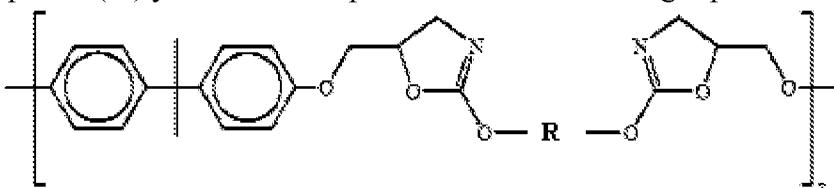
- Species (1d) yields a thermoplastic with the following repeat unit:



- Species (1e) yields a thermoplastic with the following repeat unit:



- Species (1f) yields a thermoplastic with the following repeat unit:



4. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

\* \* \* \* \*

***Priority***

6. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on December 27, 2002. The Office has acquired a certified copy of the JP 2002-381587, and it has been entered into the record of the instant application.

***Response to Amendment***

7. The objection to claims 4, 5, and 17 under 37 CFR 1.75(c) has been overcome by amendment.

8. The objection to claims 6-16 under 37 CFR 1.75(c) has been rendered moot by the cancellation of these claims.

9. The rejection of claims 1-3 under 35 U.S.C. 102(b) as being anticipated by Edwards et al. (US Pat. No. 5,891,560) has been overcome by amendment.

10. The rejection of claims 1-3 under 35 U.S.C. 102(b) as being anticipated by Kaneshiro et al. (JP 10-251423) has been overcome by amendment.

11. The rejection of claims 1-3 under 35 U.S.C. 102(b) as being anticipated by Schmid et al. (US Pat. No. 5,895,808) has been overcome by amendment.

12. The rejection of claims 1-3 under 35 U.S.C. 102(b) as being anticipated by Inata et al. (US Pat. No. 5,223,335) has been overcome by amendment.

***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is (571)272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Feely/  
Primary Examiner, Art Unit 1796

November 24, 2009